U.S.S.N. 09/219,288 Filed: December 22, 1998

Group Art Unit: 1743

Examiner: L. Alexander

Attorney Docket No. 101324-54

25. (Twice Amended) An apparatus for assisting in the identification of a marked liquid, the liquid comprising a plurality of markers miscible with the liquid and present in a predetermined pattern of relative concentrations, the apparatus comprising:

a detector for detecting the plurality of markers and for generating signals indicative of relative concentrations of each of the markers, the signals defining a measured concentration pattern; and

a pattern comparison element capable of comparing the measured concentration pattern with known concentration patterns of identified liquids, the known patterns being accessible, via a look up table, to the pattern comparison element, so as to assist in the identification of the marked liquid.

- 35. (Amended) The apparatus of claim 25, wherein said detector is limited to those portions of the electromagnetic spectrum associated with select vibrational mode signatures characteristic of said plurality of markers.
- 36. (Amended) The apparatus of claim 25, further comprising at least one additional detector, wherein the detector is limited to that portion of the electromagnetic spectrum associated with a select vibrational mode signature characteristic of a first marker and wherein the at least one additional detector is limited to that portion of the electromagnetic spectrum associated with a select vibrational mode signature characteristic of another of the plurality of markers.
- 37. (Amended) The apparatus of claim 36, wherein the detector measures a nitrile vibration and the at least one additional detector measures an isotopically labeled carbon-nitrile vibration.
- 38. (Amended) The apparatus of claim 36, wherein the detector measures infrared absorption band of a nitrile vibration at 2230 cm⁻¹ and the at least one additional detector measures an isotopically labeled carbon-nitrile infrared absorption band at 2140⁻¹ cm.



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39. (Amended) The apparatus of claim 36, wherein the detector measures a nitrile vibration and the at least one additional detector measures an isocyanate vibration.

40. (Amended) The apparatus of claim 36, wherein the detector measures infrared absorption band of a nitrile vibration at 2230 cm⁻¹ and the at least one additional detector measures an isocyanate infrared absorption band at 2268⁻¹ cm.

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41. (Amended) The apparatus of claim 36, wherein the detector measures absorbance at a wavelength of 520 nm and the at least one additional detector measures absorbance at a wavelength of 550 nm.

43. (Amended) The apparatus of claim 25, wherein said comparison element further comprises a detector for determining the ratio of the concentration of a first marker to the concentration of a second marker.